

**THE INVENTION CLAIMED IS:**

1. A system for remotely controlling passage through a gate at a parking garage, comprising:

a gate controller system located at a parking garage and being adapted to control the movement of said gate; and

5 a remote terminal at a remote location, said remote terminal being communicably coupled to said gate controller via an open network.

2. A system in accordance with claim 1, wherein said gate controller system comprises:

a computer system having a processor, disk drive, and memory; and

5 a modem adapted to communicably couple said computer system to said open network.

3. A system in accordance with claim 1, wherein said open network connection to said open network is a secure connection using cryptography.

4. A system in accordance with claim 1, wherein said open network is the Internet.

5. A system in accordance with claim 1, further comprising a touch screen monitor, said monitor being communicably coupled to said gate controller system, wherein said monitor provides a graphical user interface between a user and said gate controller system.

6. A system in accordance with claim 1, further comprising a keypad communicably coupled to said gate controller system.

7. A system in accordance with claim 1, further comprising a video camera communicably coupled to said gate controller system.

8. A system in accordance with claim 7, wherein said video camera is a digital video camera adapted to generate digital representations of images shot with said camera.

9. A system in accordance with claim 1, further comprising a microphone communicably coupled to said gate controller system.
10. A system in accordance with claim 1, further comprising a speaker communicably coupled to said gate controller system.
11. A system in accordance with claim 1, further comprising a vehicle license plate scanning system communicably coupled to said gate controller system.
12. A system in accordance with claim 1, further comprising a credit card reader communicably coupled to said gate controller system.
13. A system in accordance with claim 1, further comprising an ATM card reader communicably coupled to said gate controller system.
14. A system in accordance with claim 1, further comprising a cash intake machine communicably coupled to said gate controller system.
15. A system in accordance with claim 1, further comprising an access card scanner communicably coupled to said gate controller system.
16. A system in accordance with claim 1, further comprising a pre-paid card reader communicably coupled to said gate controller system.
17. A system in accordance with claim 1, further comprising a finger print scanner communicably coupled to said gate controller system.
18. A system in accordance with claim 1, further comprising an eye scanner communicably coupled to said gate controller system.
19. A system in accordance with claim 1, further comprising a microphone communicably coupled to said gate controller system, and wherein said gate controller

5 system further comprises a database comprising voice data, and said gate controller system further comprises a voice recognition program adapted to compare a voice received from said microphone to said voice data to authenticate a person's identity.

20. A system in accordance with claim 1, further comprising a bar code scanner communicably coupled to said gate controller system.

21. A system in accordance with claim 1, further comprising a chip reader communicably coupled to said gate controller system.

22. A system in accordance with claim 1, further comprising a radio receiver communicably coupled to said gate controller system and adapted to receive signals from a radio transmitter.

23. A system in accordance with claim 1, wherein said remote terminal comprises: a computer system having a processor, disk drive, and memory, and a modem adapted to communicably couple said computer system to said open network.

24. A system in accordance with claim 1, wherein said remote terminal comprises a video monitor communicably coupled to a video camera via said open network, wherein said video camera is within viewing distance from said gate.

25. A system in accordance with claim 1, wherein said remote terminal comprises a microphone and a speaker.

26. A system in accordance with claim 1, wherein said remote terminal comprises a database having information relevant to said gate.

27. A system in accordance with claim 1, wherein said gate controller system comprises an application service provider system.

28. A system in accordance with claim 27, further comprising an additional gate, said additional gate being adapted to move in response to signals from said application service provider system.

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29. A web based parking garage gate system, comprising:  
a gate controller system located at a parking garage and being adapted to control the movement of a parking garage gate at said parking garage;

5 an application service provider computer system located remotely from said gate controller system, said gate controller system being communicably coupled to said application service provider computer system, said application service provider computer system comprising code and data adapted to generate a web site that allows users at a remote location to interact with said gate controller system via the Internet.

30. A system in accordance with claim 29, wherein said interaction with said gate controller system includes the ability to send motion control commands to said gate controller system using said web site.

31. A system in accordance with claim 29, wherein said interaction with said gate controller system includes the ability to monitor data from said gate controller system relating to said parking garage gate.

32. A system in accordance with claim 29, wherein said interaction with said gate controller system includes the ability to program settings for said gate controller system.

33. A system in accordance with claim 29, wherein said interaction with said gate controller system includes the ability to download a report detailing recorded data regarding said parking garage gate.

34. A system in accordance with claim 29, wherein said interaction with said gate controller system includes the ability to transfer data from said gate controller system to said users at said remote location.

35. A system in accordance with claim 29, wherein said interaction with said gate controller system includes the ability to change gate control features from said remote location using said web site.

36. A system in accordance with claim 29, wherein said gate controller system comprises a microprocessor, a storage medium, and memory.
37. A system in accordance with claim 29, wherein said gate controller system comprises a touch screen monitor interface for patrons at said gate to interact with said gate controller system.
38. A system in accordance with claim 29, further comprising a camera communicably coupled to said gate controller system.
39. A system in accordance with claim 38, wherein said interaction with said gate controller system includes the ability to view images from said camera from said remote location via said web site.
40. A system in accordance with claim 38, wherein said interaction with said gate controller system includes the ability to control the position of said camera from said remote location using said web site.
41. A system in accordance with claim 29, further comprising a microphone and speaker at said gate and communicably coupled to said gate controller system, and wherein said interaction with said gate controller system includes the ability to talk to a patron at said gate from said remote location via said web site.
42. A system in accordance with claim 29, wherein said gate controller system is communicably coupled to said application service provider computer system via a secure open network connection.
43. A system in accordance with claim 29, wherein said gate controller system is communicably coupled to said application service provider computer system via the Internet.

44. A system in accordance with claim 29, wherein said gate controller system is communicably coupled to said application service provider computer system via a dedicated line.

45. A system in accordance with claim 29, wherein said gate controller system is communicably coupled to said application service provider computer system via a wireless communication system.

46. A system in accordance with claim 29, wherein said gate controller system is communicably coupled to said application service provider computer system via a radio frequency channel.

47. A system in accordance with claim 29, wherein said gate controller system is communicably coupled to said application service provider computer system via a satellite communication system.

48. A system for controlling passage through a gate for a parking garage, comprising:  
a first computer system located at said parking garage, said first computer system  
being adapted to control the movement of said parking garage gate and being  
communicably coupled to the Internet; and

5 a second computer system located remotely from said first computer system, said  
second computer system being capable of communicably coupling to the Internet as  
needed; and

10 a server computer system comprising a software program adapted to provide code  
and data to said second computer system via the Internet, said code and data being  
adapted to output a graphical user interface with text on said second computer system,  
wherein said graphical user interface with text comprises an interface to allow a user at  
said second computer system to control said parking garage gate remotely via the  
Internet.

49. A system in accordance with claim 48, wherein said first computer system is said  
server computer system.

50. A system in accordance with claim 48, wherein said server computer system is  
located remotely from said first computer system.

51. A system in accordance with claim 48, wherein said graphical user interface is a  
web site and said second computer system comprises a browser software application  
adapted to view said web site.

52. A system in accordance with claim 48, wherein said code and data further  
comprises image data from a camera proximate to said gate such that said graphical user  
interface allows said user to view said gate using said image data.

53. A system in accordance with claim 48, further comprising:  
a first microphone and a first speaker at said gate;



a second microphone and a second speaker at said second computer system, such that said user can communicate with a patron of said parking garage via the Internet.

54. A system in accordance with claim 48, further comprising a touch screen monitor at said gate, said touch screen monitor being communicably coupled to said first computer system, wherein said first computer system comprises software adapted to provide a second graphical user interface on said monitor such that a patron of said parking garage can interact with said first computer system using said monitor.

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55. A parking garage gate system, comprising:

a gate controller system located at a parking garage and being adapted to control the movement of said parking garage gate; and

an application service provider computer system located remotely from said gate controller system and said gate, said gate controller system being communicably coupled to said application service provider computer system via the Internet, said application service provider computer system comprising a software program adapted to interact with and control said gate controller system from said remote location.

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56. A system for controlling the usage of a parking garage, comprising:  
a gate at least partially blocking an automobile passageway for said parking garage;

a gate controller system located at said parking garage and being adapted to control the movement of said gate;

a remote terminal located at a remote location apart from said parking garage, said remote terminal being communicably coupled to said gate controller system via the Internet; and

a software program adapted to run on said remote terminal and adapted to allow a user at said remote location to be in command of said gate controller system.

57. A system in accordance with claim 56, further comprising one or more additional gates adapted to being controlled by said gate controller system, wherein said software program allows said user to control any combination of said gates.

58. A system in accordance with claim 56, further comprising:

an additional gate at least partially blocking an additional automobile passageway for said parking garage; and

a corresponding additional gate controller system for said additional gate, said additional gate controller system being located at said parking garage and being adapted to control the movement of said additional gate, wherein said remote terminal is communicably coupled to said additional gate controller via the Internet, and wherein said software program is further adapted to allow said user at said remote location to be in command of said additional gate controller system.

59. A method of controlling passage through a parking garage gate, comprising the steps of:

providing a gate controller system located at a parking garage and being adapted to control the movement of said gate;

5 providing a remote terminal at a remote location apart from said parking garage, said remote terminal being communicably coupled to said gate controller system via an open network;

sending a command from said remote terminal to said gate controller system via said open network; and

10 moving said gate with said gate controller system in response to said command from said remote terminal.

60. A method in accordance with claim 59, further comprising the steps of:

providing a touch screen monitor that is communicably coupled to said gate controller system;

providing a graphical user interface on said monitor;

5 inputting information into said gate controller system via said monitor; and

transmitting said inputted information from said gate controller system to said remote terminal via said open network.

61. A method in accordance with claim 59, further comprising the steps of:

providing a communication system at said gate; and

communicating with a patron at said gate from said remote terminal using said communication system via said open network.

62. A method in accordance with claim 59, further comprising the step of:

establishing a secure open network connection between said gate controller system and said remote terminal via said open network using cryptography.

63. A method in accordance with claim 59, further comprising the steps of:

providing a video camera proximate to said gate, wherein said video camera is communicably coupled to said gate controller system;

transmitting images from said video camera to said remote terminal by said gate controller system and via said open network; and

viewing a patron at said gate from said remote terminal using said transmitted images.

64. A method in accordance with claim 63, further comprising the steps of:  
visually authenticating the identity of said patron at said remote terminal using said transmitted images;

if said patron is authorized to pass through said gate and if said visually authentication sufficiently confirms said patron's identity, then performing said sending command step from said remote terminal so that said moving gate step will occur; and allowing said patron to pass through said gate.

65. A method in accordance with claim 59, further comprising the step of:  
storing data relating to said moving of said gate on a storage medium at said gate controller system.

66. A method in accordance with claim 59, further comprising the steps of:  
transmitting data relating to said moving of said gate to said remote terminal via said open network; and

storing at least part of said transmitted data on a storage medium at said remote terminal.

67. A method in accordance with claim 59, further comprising the steps of:  
receiving input at said gate controller system relating to authorization of a patron to pass through said gate;

transmitting said received input from said gate controller system to said remote terminal;

processing said received input at said remote terminal to determine whether said patron is authorized to pass through said gate;

if said patron is authorized to pass through said gate, then performing said sending command step from said remote terminal so that said moving gate step will occur; and

10           allowing said patron to pass through said gate.

68.    A method in accordance with claim 67, wherein said receiving input step involves said patron providing cash payment at said gate.

69.    A method in accordance with claim 67, wherein said receiving input step involves said patron inputting credit card information at said gate.

70.    A method in accordance with claim 69, wherein said inputting credit card information step involves the use of a credit card reader.

71.    A method in accordance with claim 69, wherein said inputting credit card information step involves the use of a keypad.

72.    A method in accordance with claim 69, wherein said inputting credit card information step involves the use of a touch screen monitor with a graphical user interface.

73.    A method in accordance with claim 67, wherein said receiving input step involves said patron inputting ATM card information at said gate.

74.    A method in accordance with claim 73, wherein said inputting ATM card information step involves the use of a ATM card reader.

75.    A method in accordance with claim 73, wherein said inputting ATM card information step involves the use of a keypad.

76. A method in accordance with claim 73, wherein said inputting ATM card information step involves the use of a touch screen monitor with a graphical user interface.
77. A method in accordance with claim 67, wherein said receiving input step involves said patron inputting cash in a cash receiving machine at said gate.
78. A method in accordance with claim 67, wherein said receiving input step involves said patron scanning a pre-paid card at said gate.
79. A method in accordance with claim 67, wherein said receiving input step involves said patron scanning an access card at said gate.
80. A method in accordance with claim 67, wherein said receiving input step involves scanning a toll tag device on a vehicle of said patron at said gate.
81. A method in accordance with claim 67, wherein said receiving input step involves scanning at least one fingerprint of said patron at said gate.
82. A method in accordance with claim 67, wherein said receiving input step involves scanning at least one eye of said patron at said gate.
83. A method in accordance with claim 67, wherein said receiving input step involves scanning a bar code at said gate.
84. A method in accordance with claim 67, wherein said receiving input step involves scanning a validated ticket at said gate.
85. A method in accordance with claim 67, wherein said receiving input step involves scanning a time stamped ticket at said gate.

86. A method of controlling passage of a vehicle of a parking garage patron through an unmanned gate at a parking garage, comprising the steps of:

providing a first computer system at said parking garage, said first computer system being communicably coupled to the Internet via a secure connection;

5 providing a mechanism at said gate, said mechanism being adapted to move said gate in response to control signals from said first computer system;

providing a second computer system located at a remote location relative to said first computer system and said parking garage, wherein said second computer system is adapted to be communicably coupled to the Internet as needed;

10 communicating with said patron at said gate from said remote location using said computer systems and via the Internet;

authorizing passage of said patron through said gate from said remote location;

15 sending a gate movement command from said second computer system to said first computer system via the Internet; and

moving said gate to allow said patron to pass through said gate based on said gate movement command.

87. A method in accordance with claim 86, wherein a web page display is provided to a browser on said second computer system via the Internet for a user at said remote location to interact with said first computer system.

88. A method in accordance with claim 86, further comprising the step of:  
controlling said mechanism from said remote location using said second computer system.

89. A method in accordance with claim 86, further comprising the steps of:  
providing a first graphical user interface at said gate for said patron, said first graphical user interface being communicably coupled to said first computer system;  
said communicating with said patron step comprising the step of prompting said  
5 patron to input information at said gate via said first graphical user interface;



transmitting said inputted information to said second computer system with said first computer system and via the Internet; and

said authorizing passage step being performed by said second computer system based on said inputted information from said patron.

90. A method in accordance with claim 89, further comprising the step of:  
comparing said inputted information to database information stored at said second computer system to determine if said patron should be authorized to pass through said gate.

91. A method in accordance with claim 89, wherein said graphical user interface is a touch screen monitor.

92. A method in accordance with claim 86, further comprising the step of:  
providing a first microphone and a first speaker at said gate, said first microphone and speaker being communicably coupled to said first computer system;  
providing a voice recognition program; and  
wherein said communicating with said patron step comprises the steps of:

asking said patron questions with a computer generated voice via said first speaker at said gate,

receiving a voice response from said patron with said first microphone at said gate,

converting said voice response from said patron into a digital form that a computer can understand using said voice recognition program, and

reacting to said voice response from said patron based on a set of logic rules and algorithms.

93. A method in accordance with claim 92, further comprising the steps of:  
providing a second microphone and a second speaker at said remote location, said second microphone and speaker being communicably coupled to said second computer system; and

5           verbally communicating with said patron from said remote location, wherein said voice data is transmitted between said first and second computer systems via the Internet.

94.    A method in accordance with claim 86, further comprising the step of:  
          providing a second graphical user interface at said remote location for said user, said second graphical user interface being communicably coupled to said second computer system; and

5           controlling said gate at said parking garage using said second graphical user interface.

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95. A method of providing remote assistance at a parking gate of a parking facility, comprising the steps of:

providing a first computer system at said parking facility, said first computer system being communicably coupled to said Internet via a secure connection;

5 providing a mechanism at said gate, said mechanism being adapted to move said gate in response to control signals from said first computer system;

providing an interface system at a payment transaction device being adapted to transmit and receive audio and video information for communicating with a parking patron;

10 providing a presence detection device to sense the presence of said patron at said payment transaction device;

providing a second computer system located at a remote location relative to said first computer system and said parking facility, wherein said second computer system is adapted to be communicably coupled to said Internet as needed;

15 communicating with said patron at said gate from said remote location using said computer systems and via said Internet;

providing assistance in processing payments via an onsite cash acceptor or an onsite credit card processor or an offsite credit card processor;

authorizing passage of said patron through said gate from said remote location;

20 sending a gate movement command from said second computer system to said first computer system via said Internet; and

moving said gate to allow said patron to pass through said gate based on said gate movement command.

96. A method in accordance with claim 95, wherein said interface system comprises a touch screen monitor.

97. A method in accordance with claim 95, wherein said interface system comprises a video camera, a microphone, and a speaker.

98. A method in accordance with claim 95, further comprising the steps of:  
providing a voice recognition program; and  
wherein said communicating with said patron step further comprises the steps of:  
asking said patron questions with a computer generated voice,  
receiving a voice response from said patron,  
converting said voice response from said patron into a digital form that a  
computer can understand using said voice recognition program, and  
reacting to said voice response from said patron based on a set of logic  
rules and algorithms.

99. A method in accordance with claim 98, further comprising the steps of:  
comparing said converted voice response to voice data; and  
storing said voice data in a database to identify said patron.

100. A method in accordance with claim 95, further comprising the steps of:  
recording at least part of said communicating with said patron step.